

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Alexander SCHNELL *et al.*

Application No.: 10/597,010

Art Unit: 1793

Filing Date: 20 April 2007

Examiner: Mekhlin, Eli S.

For: Braze Alloy and Use of a Braze Alloy

Attorney Ref. No.: 003-239

Confirmation No. 4697

**REQUEST FOR PRE-APPEAL BRIEF REVIEW CONFERENCE**

**Mail Stop AF**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated 7 October 2009 ("Office Action"), Applicant requests a Pre-Appeal Brief Conference Review in accordance with the guidelines set forth in the 12 July 2005 Official Gazette Notice (New Pre-Appeal Brief Conference Pilot Program, 1296 *Off. Gaz. Pat. Office* 67 (July 12, 2005); *see also* Extension of the Pilot Pre-Appeal Brief Conference Program, 1303 *Off. Gaz. Pat. Office* 21 (January 10, 2006)) (collectively, "Notice"). Reconsideration of this application by a three-Examiner panel is requested in view of the following remarks which identify the errors in facts, and the omission of essential elements, required to establish *prima facie* rejections. Applicant files a Notice of Appeal and a Petition for a one-month extension of time concurrently herewith; 7 February 2010 was a Sunday, and on 8 February 2010 the Federal Government in the District of Columbia was closed because of a snow emergency.

**Summary of the Office Action and Status of Application**

Beginning at page 3 of the Office Action, Claims 1, 2, and 5 were rejected under 35 U.S.C. § 103(a) as reciting subject matters that are allegedly obvious, and therefore allegedly

unpatentable, over U.S. Patent Application Publication No. 2003/0066177, invented by Schnell *et al.* ("Schnell") in view of U.S. Patent No. 5,240,491, issued to Budinger *et al.* ("Budinger"), for the reasons presented at pages 3-4. Beginning at page 4, Claims 6 and 10 were rejected under 35 U.S.C. § 103(a) as reciting subject matters that are allegedly obvious, and therefore allegedly unpatentable, over *Schnell* and *Budinger* as applied to Claims 1, 2, and 5 above, and further in view of *Stern*, for the reasons presented at pages 4-5. Beginning at page 5, Claims 7, 8, and 11 were rejected under 35 U.S.C. § 103(a) as reciting subject matters that are allegedly obvious, and therefore allegedly unpatentable, over *Schnell*, *Budinger*, and *Stern*, and further in view of *Schaefer*, for the reasons presented at pages 5-7. Beginning at page 7, Claim 9 was lastly rejected under 35 U.S.C. § 103(a) as reciting subject matter that is allegedly obvious, and therefore allegedly unpatentable, over *Schnell*, *Budinger*, *Stern*, and *Schaefer*, and further in view of *Van Esch* and *Rafferty*, for the reasons presented at pages 7-8.

### **Summary of the Claimed Invention**

As requested in the Notice, a summary of aspects of an embodiment adhering to principles of the claimed invention can be found in Applicant's Amendment and Response filed April 15, 2009.

### **Omission of Essential Elements Required for a *prima facie* case, Necessitating Review**

The Office Action fails to present essential elements needed to support the rejections under 35 U.S.C. § 103(a), which omissions necessitate review and withdrawal of the Office Action. Claim 1, the sole independent claim, relates to a braze alloy consisting of, in wt.-%: 10-15% Cr, 4.5-6% Al, 0.17-0.3% Y, 8-12% Co, 0-4% W, 2.5-5% Ta, 2.0-3.5% B, with Cr+Al > 15%, Cr/Al ≤ 3, and Al+Ta > 7.5 %, remainder Nickel and impurities.

The Office Action, at page 2, alleges that *Schnell* describes ranges of constituents of braze alloys, when in fact *Schnell* describes eight distinct alloys in Table 1. Nowhere does *Schnell* describe that the alloys of interest are defined by ranges of constituents, but instead describes points, that is, very specific alloys. Thus, under the law of anticipation in the U.S., *Schnell* does not describe either a single alloy, or a set of alloys, which is exactly as required by the claim (ignoring the Y limitation). Thus, contrary to the statements in the “Response to Arguments” section of the Office Action, *Schnell* does not describe any alloy that, momentarily ignoring the Y content, is read on by the pending claims. That is, the *Schnell* alloys not only ignore the Y content, but are also outside the claimed ranges for Al (alloys No. 1-5 and 8) or for B (alloy No. 7) or for both Al and B (alloys No. 5 and 8).

Applicant files concurrently herewith a Declaration of Dr. Alexander Schnell, the first-named inventor of both this and the application upon which the *Schnell* publication was based. As simply put by Dr. Schnell, the *Schnell* document does not describe ranges of weight percentages for alloys, but instead describes only eight individual alloys. Thus, the Office Action is simply incorrect in alleging that *Schnell* describes ranges, upon which allegation the rejection of the claims under section 103(a) is entirely based. The filing of this Declaration is timely, as the Office Action was the first instance in which the PTO alleged that the *Schnell* document described ranges, rather than points, that is, individual alloys, and based the rejection under section 103(a) on that allegation.

Thus, the Office Action is correct in noting that *Schnell* describes brazing alloys with chemical compositions that - regarding the Cr-, Co-, W-, Ta-, Al-, B- and Ni- content – at points only overlap or are inside the ranges recited in Claim 1, and that *Schnell* is silent about the yttrium content in a range of 0.17 to 0.3 wt%. *Schnell* is also silent about three other features recited in the combination of Claim 1: “Cr+Al>15%, Cr/Al ≤3, and Al+Ta>7.5%”. There is no

discussion, description, or even a hint in *Schnell* to use these criteria when designing a brazing alloy. The configuration with 11 wt% Cr, 4.5 wt% Al and 3.5 wt% Ta, cited in the Office Action, was selected randomly, is not actually disclosed in *Schnell* as an alloy, and therefore was the product of an impermissible hindsight reconstruction of the claimed combination based solely on Applicant's own specification. None of the exemplary alloys described in *Schnell*, Nos. 1 to 9 in *Schnell*'s Table 1, is read on by the claimed alloy, as demonstrated in the table appearing in Applicant's response of 16 September 2009.

Therefore, *Schnell* neither realized the importance and effect of these three features, nor disclosed Y as an alloying element; and, naturally, *Schnell* did not disclose the specific range of Y (0.17-0.30 wt%). As discussed in this application, (see page 8, last 3 lines), it was an unexpected effect that, with such a high Y content in the brazing alloy, such an enhanced high temperature oxidation resistance could be reached. Furthermore, the yttrium content is balanced with - among others - the Cr/Al ratio of the alloy. The Cr/Al ratio has a maximum 3 as recited in Claim 1, and the Y content is an adaptation to the specific composition.

The Office Action does not allege that *Budinger, Stern, Schaefer, Van Esch, and Rafferty* cure the fundamental deficiencies of *Schnell*, described above, with respect to the combinations of the pending claims. Thus, assuming, *arguendo*, that the secondary and tertiary documents were combined with *Schnell* without the benefit of an impermissible hindsight reconstruction of Applicant's claimed combination based on Applicant's own specification, the resulting hypothetical construct would still not include each and every feature of the claimed combinations, at least because none of these additional documents bridge the gap between what *Schnell* actually describes and what the Office Action erroneously alleges that it does.

### **Conclusion**

Applicant respectfully submits that this application is in immediate and clear form for allowance based on the clear errors and omissions cited above. Accordingly, an early indication, via Notices of Allowance and Allowability, that all claims are allowed, is respectfully requested. Should any questions arise in connection with this application or should Mr. Mekhlin believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. If, however, additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and the Commissioner is hereby authorized to charge fees necessitated by this paper, and to credit all refunds and overpayments, to our Deposit Account 50-2821.

Respectfully submitted,

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